

## CLAIMS

1. A laser driver generating an Imod current and an Ibias current, said laser driver characterized in that a portion of said Ibias current is fed forward to said Imod current.

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2. A laser driver according to said claim 1, wherein said portion of said Ibias current being fed forward to said Imod current is predetermined by a user.

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3. A laser driver according to claim 2, wherein said Imod current is produced by a first Imod current source, said first Imod current source electrically coupled in parallel to a second Imod current source and said portion of said Ibias current being fed forward to said Imod current is fed into only said second of said at least two Imod current sources.

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4. A laser driver according to claim 1, wherein said Imod current is produced by a first Imod current source, said first Imod current source electrically coupled in parallel to a second Imod current source and said portion of said Ibias current being fed forward to said Imod current is fed into only said second of said at least two Imod current sources.

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5. A laser driver according to claim 3, wherein said portion of said Ibias current being fed forward to said Imod current is between 30-200%.

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6. A laser system comprising:  
a laser;

a laser driver generating an  $I_{mod}$  current and an  $I_{bias}$  current for controlling said laser, said laser driver characterized in that a portion of said  $I_{bias}$  current is fed forward to said  $I_{mod}$  current; and

wherein said  $I_{bias}$  current feed forward decreases an extinction ratio said  
5 laser driver.

7. A laser system according to said claim 6, wherein said portion of said  $I_{bias}$  current being fed forward to said  $I_{mod}$  current is predetermined by a user.

8. A laser system according to claim 7, wherein said  $I_{mod}$  current is produced by a first  $I_{mod}$  current source, said first  $I_{mod}$  current source electrically coupled in parallel to a second  $I_{mod}$  current source and said portion of said  $I_{bias}$  current being fed forward to said  $I_{mod}$  current is fed into only said second of said at least two  $I_{mod}$  current sources.

9. A laser driver according to claim 6, wherein said  $I_{mod}$  current is produced by a first  $I_{mod}$  current source, said first  $I_{mod}$  current source electrically coupled in parallel to a second  $I_{mod}$  current source and said portion of said  $I_{bias}$  current being fed forward to said  $I_{mod}$  current is fed into only said second of said  
20 at least two  $I_{mod}$  current sources.

10. A laser system according to claim 8, wherein said portion of said  $I_{bias}$  current being fed forward to said  $I_{mod}$  current is between 30-200%.

25 11. A method of controlling an extinction ratio of a laser driver comprising an  $I_{mod}$  current and an  $I_{bias}$  current, said method comprising an act of feeding forward a portion of said  $I_{bias}$  current to said  $I_{mod}$  current.

12. A method of controlling an extinction ratio of a laser driver according to claim 11, further comprising an act of enabling a user to control said portion of said Ibias current being fed forward to said Imod current.

13. A method of controlling an extinction ratio of a laser driver according to claim 11, said method further comprising acts of:

producing said Imod current by a first Imod current source electrically coupled in parallel to a second Imod current source; and

feeding forward said portion of said Ibias current into only said second of said Imod current sources.

14. A method of controlling an extinction ratio of a laser driver according to claim 11, wherein said portion of said Ibias current being fed forward to said Imod current is between 30-200%.

15. A system for stabilizing an extinction ratio of an optical transmitter comprising:

a laser diode driver;

20 a photo monitor;

an I-mod current that controls an on and off state of said laser diode driver;

an I-bias current that provides a base line power level to said laser diver, creating an extinction ratio; and

25 wherein a portion of said I-bias current is fed forward into said I-mod current,

whereby said extinction ratio is stabilized.

16. A system for stabilizing an extinction ratio of an optical transmitter as in claim 15, wherein said portion of said I-bias current being fed forward into said I-mod current is fed forward into a branch arm.

5 17. A system for stabilizing an extinction ratio of an optical transmitter as in claim 15, wherein said portion of said I-bias current being fed forward into said I-mod current is between 30 and 200 percent.